# Interannual variability of equatorial wave field

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Using the statistical technique developed earlier for analysis of equatorially trapped waves, we investigate seasonal and interannual variations of basic properties of long baroclinic waves in the Pacific equatorial waveguide. These properties include the amplitude, speed and spectral characteristics of trapped modes, as well as meridional variations of the wave amplitude, i.e. the structure of the waveguide. The wave properties, analyzed in the framework of equatorial wave theory, yield quantitative characterization of the water density profile.

Furthermore, their seasonal and annual variations are studied over the duration of the Topex/Poseidon mission and compared to the corresponding time histories obtained by direct observations. Of particular interest is variation of the Rossby wave field versus variations of the El Nino index.